

Gliders for Ocean Observatories



Teledyne Webb Research (TWR, USA) is to provide Coastal Gliders for the Ocean Observatories Initiative (OOI, USA). The Slocum G2 gliders will support the Pioneer and Endurance Arrays of the OOI Coastal and Global Scale Nodes (CGSN) in a contract valued at up to 5.6 million dollars. This will include a prototype vehicle to be delivered this year that will incorporate specific CGSN sensor requirements.

Production units will be delivered at the beginning of April 2012. The initial contract award is USD260,000. Teledyne Webb Research was chosen by The Consortium for Ocean Leadership and the Woods Hole Oceanographic Institute (WHOI) to provide the gliders for this project that is funded by the National Science Foundation (NSF).

The Slocum G2 gliders are designed for long deployment endurance, with the ability to manoeuvre and operate where the total water depth is less than 30 metres and up to 1,000 metres along deeper coastlines. The uniquely modular vehicle construction facilitates both swappable payload bays for a multitude of integrated sensor suites and optimised buoyancy control for various depth regimes.

The Ocean Observatories Initiative is a multi-scale observatory that will utilise a network of sensor systems to collect physical, chemical, geological and biological data from the ocean and the seafloor on coastal, regional and global scales. A unique cyberinfrastructure will make the data available to anyone with an internet connection. The information will increase understanding of climate change, ocean and coastal ecosystems, environmental health and climate, and biodiversity.

Clayton Jones, senior director for Technology at Teledyne Webb Research, expresses that the collective vision is to provide sensor platforms that will allow the partners to better understand the interior of the world's oceans. The framework of OOI is an outstanding example of such the effort, and Teledyne Webb Research is seeing Slocum gliders being a key element in the network with their sustained adaptive monitoring capabilities.

Gliders were first conceived by Douglas Webb, the founder of Webb Research and a former researcher at the Woods Hole Oceanographic Institution (WHOI). The Slocum G2 Glider is a torpedo-shaped autonomous underwater winged vehicle that measures 1.5 metres and uses changes in buoyancy along with its wings and tail-fin steering to move through the water.